

for six months. If it can be proved hereafter that death has occurred through want of efficient drainage, the council ought to be indicted for manslaughter.—At *Gateshead*, Mr. Dobson, architect, has been called in to advise as to the best mode of sewerage the main thoroughfare.—And at *Lincoln*, Mr. Giles, engineer, is preparing plans, by direction of the corporation, for a system of underground sewers.*

A striking evidence of the effect of locality, and improved structural arrangements, on the health of the inhabitants of towns, has just appeared in the shape of a report from *Hamburg*, by Mr. Grainger.† The fire of 1842 led to the re-arrangement of the greater part of the town, and under the direction of Mr. Lindley, engineer, the water supply, drainage, laying out of the streets, &c., have been carefully attended to. The result is said to be a diminution of disease to a considerable extent, and an exemption from cholera particularly, during the visitation of the present year, as remarkable as it is important.

The facts given in this report afford an additional confirmation of the great principle established by former researches—"that amidst the town populations the cholera visits with most severity the same class of persons and the same places, and is governed by similar circumstances, as typhus." "The firm establishment of this position is of infinite moment, inasmuch as by bringing cholera into the same category as low fever, no one accustomed to these inquiries would doubt that as certainly as the per-centage of typhus decreases with improved drainage, paving, and ventilation, so also will epidemic cholera. The proof of this has been afforded on a grand scale at *Hamburg*. The ravages of the disease have received a marked check, in the present outbreak, by the substitution of wide, open, and well-drained streets, for narrow, filthy, and damp thoroughfares; by the removal of high mounds of earth, blocking up the streets and overshadowing the houses, and by guarding a large evaporating surface of water from contamination."

The influence of these improvements will not cease with the present year, but will be perpetuated for ages to come; they will benefit not merely the existing race, but distant generations of inhabitants; and the immediate expense incurred in effecting them will be found to be a vast ultimate economy, even in money, irrespective of the result—which is beyond price—the gain in improved health and lengthened life.

THE SERPENTINE AND KENSINGTON GARDENS.—The commissioners of her Majesty's Woods, &c., are now draining the Serpentine, prior to the measures they are about to adopt to remedy the stagnant state of the water. Would not this be a good opportunity to remove the dumb waiter at the end of the ornamental water in Kensington Gardens, and substitute a fountain of some architectural pretensions? A very small outlay would effect this, and I am sure, even those who have the most extreme views of retrenchment, would not object to see something there that we should not be ashamed of (as we all are at present). The two floating islands also, for the ornamental water fowls, *alias* common ducks, if necessary, might likewise be improved.—O.H.

* Amongst the publications before us is a very comprehensive "Report of the Town Council of Chester, on the Sewerage and other Works under the Improvement Act," by Mr. Mayle, the borough surveyor.—Mr. Wicheford, Jun., architect, has just now published (*Wichford, Malinsford, Longman, London*), "Observations on the Sanitary Condition of *Madison*, with a view to the introduction of the Act for promoting the Public Health," which appears to be a sensible production.

† In the official circular (No. 6) issued by the Board of Health.

PROFESSOR COCKERELL'S LECTURES ON ARCHITECTURE.

THE fourth lecture of the course, at the Royal Academy, delivered on Thursday, the 25th ult., to which the limits of our usual summary hardly allow us to do proper justice, was a very able exposition of what the professor described as the two cardinal principles in design, namely, first, precedent or authority, and second, invention exercised by means of new combinations, or sometimes new elements. With regard to the first, he said that it was the great duty of institutions like the academy to direct attention to the models of antiquity, and to indicate the authors who were to be consulted. It was its office to stand, in the full conservative spirit, in opposition to all depreciation of tried experience. In a proper understanding of these models depended the true value of precedent. The love of it must not, however, be allowed to hold entire possession of the architect, or it would easily degenerate into superstition. Two states of the mind, therefore, were necessary, the one retrospective, the other prospective, and we were to dispense with neither one nor the other: each had claims—each defects.

We might reflect that the intellectual man was compounded of knowledge, stored up in his early days. The appetite was suited to the age. The time came when he repented of every idle hour, and when he had to employ the knowledge he might possess. He would become deeply sensible of the value of information, and would be impressed with a wholesome reverence for precedent, but feeling these, he must guard against the danger of superstition and pedantry, which might tend to the dogmatic belief in no other model than the particular one he set up for himself, or no other master than the one from whom he gained his assumed precepts. Some in the love of novelty might depreciate former things; but it was hardly possible for an artist of sensibility to contemplate, without emotion, the monuments of former art, such as so powerfully impressed the mind of Brunelleschi in the grand monuments of ancient Rome. But we must guard against the misconception alluded to by the poet, who said,—

"To observations which ourselves we make,
We grow more partial for the observer's sake."

We must enter into the considerations of structure in our buildings, and turn peculiar requirements into peculiar advantages. In so doing, we should find—

"Spontaneous beauties all around advance,
Start'd ere from difficulty, strike from chance."

We must impress our works with a character peculiarly their own, and not afford the opportunity of a contrast, such as that between the truth and beauty of the portraits of the old masters, and the portraits of our grandfathers.

On the other hand, the professor continued, we had to deal with the innovators in art, and these were of two kinds. We had those who professed to have discovered some entirely new principle, or made some new invention, and who argued with a certain show of reason. Such theories might, or might not, be correct, but we were not able to get ourselves to understand and assent to them. The injustice to the authors of such theories could not be avoided, and they must be content, if able, to rank themselves with Socrates, and others who were before their age, and whose opinions sooner or later might prevail. Others there were who laboured to show the defects in the present practice of the art, and what ought to have been avoided in this work or the other. But these gave us nothing in the place of what they condemned,—no stable principles,—but confessed that they must be left to time to unfold. It must of course be recollected that there were two parties to all inventions, namely, those who originated, and those who received the invention, that was to say, the public. The elements of our art, indeed, were few, but were capable of a multitude of combinations. From the seven notes in music were produced a great number of beautiful melodies; from the twenty-six letters of the alphabet was compounded all that Shakspeare had written. In these cases how small in number were the elements, but, how to accomplish a similar number of beautiful combinations, there was "the rub."

Away, then, said the professor, with those ideas of absolute novelty which presented themselves to some persons. Those who knocked down, must erect something instead. Our neighbours knocked down a monarchy, and they erected a republic.—He recommended the critical examination of buildings, as calculated to improve the mental qualifications for the practice of design, but impressed upon his hearers the propriety of accompanying criticism with moderation of temper. He suggested that they should strive to find out in what parts of a composition æsthetical character was attained, and where it was deficient, and whether the proportion was right or wrong, and why. Criticism, he urged, was one thing, and abuse or diatribe another; and he pointed out by which spirit we should most contribute to what was accordant with morality. He, the professor, had shown that there was a theory of taste and beauty, as surely as there was a theory of beauty and geometry, in nature,—that nature was

"At once the source, and end, and test of art,"—

and that the great artists were those who best understood nature; and he intended also to show, by a review of the history of the art, how minute were the changes which took place, and in answer to some who urged the desirableness of an entire alteration in present systems, with a view to novelty, how gradually the inventions of the old masters had been fostered. Comparing great things with small, that was to say, the laws of nature with those of art, we were struck by the occurrence of the same features in all animals, modified by a law of gradation. The snout of one animal became in another a proboscis, or, in opposite terms, the features which were expanded in one animal, in another were hardly recognizable. The arcuated and trabeated systems pervaded the whole of architecture, and yet invention had long consisted merely in the recombination of these elementary principles, at least not in the attainment of absolute novelty.

The professor then, to illustrate the subject further, glanced at the progress of invention, as seen in some of the most important examples of architecture. Commencing with the trabeated, or post-and-beam system, he showed that this, whether amongst the Egyptians, the Greeks, the Druids, or other nations, continued for a long period to hold possession of the art. Variations of character were effected by variations of size, or by other means, as for example, sculptured decoration, and the arch known to the early Egyptians, and used at an early period by the Romans in works of utility, did not for centuries create any change in the decorative character of buildings. Instances of the importance of the arch in Roman architecture, were shown in the sections of one of the temples at *Baalbec*, and in that of *Venus at Rome*. In the latter, the vault which formed the ceiling was 70 feet in span. Before alluding to the use of the arch in the Roman *thermae*, he described the corresponding buildings of Greece, or *gymnasia*. He said, we must still hope for further enlightenment on the arrangement of these buildings, which, existing at such places as *Hierapolis*, and *Alexandria Troas*, it would be extremely interesting to find contemporary with the age of Alexander. He gave a striking instance of the importance attached to *gymnasia*, and of their magnitude, in showing that the gymnasium at *Ephesus* was one of three which existed in that city, and, by one of his clever comparative plans, that the building would cover a square space extending from the back of the Horse Guards up to the enclosure of the park. He also showed how Mr. Wilkins, who was the first to clear up the difficulties of the other commentators of Vitruvius, developed the plan of the building in accordance with the description of the author. Passing on to the *thermae*, he showed the vast extent of the baths of *Caracalla*, which would cover a space equal to that enclosed by *Pall-mall*, *St. James's-street*, *Piccadilly*, and *Regent-street*. He pointed out the beautiful forms, and the variety in the plans of the different apartments, and the effective introduction of apsidal and circular forms, and showed the immense size of the *cella solaris*, the dome of which was second only to that of the *Pantheon*. He also spoke of the ingenuity in providing the necessary